



OIEP

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DATE: 03/04/2002

PATENT APPLICATION: US/10/077,111

TIME: 14:52:07

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3 <110> APPLICANT: Todderud, C. Gordon
4     Finger, Joshua N.
5     Rillema, Jill
7 <120> TITLE OF INVENTION: TBA
9 <130> FILE REFERENCE: 3053-4114US2
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/077,111
C--> 12 <141> CURRENT FILING DATE: 2002-02-15
14 <150> PRIOR APPLICATION NUMBER: 60/294,181
15 <151> PRIOR FILING DATE: 2001-05-29
17 <150> PRIOR APPLICATION NUMBER: 60/269,366
18 <151> PRIOR FILING DATE: 2001-02-16
20 <160> NUMBER OF SEQ ID NOS: 25
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57 tgaatgattt ataggtaaact actaatcaga cattattaaa agcaaaacag gaaaaagta 1680
58 aacttcttaa atttagttac ctataaaaaa tgtcaatttt cattctttaa aaaacacatg 1740
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70 Cys Cys Ala Phe Ser Phe Ser Leu Leu Ala Thr Cys Ser Leu Asp Lys
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72 Thr Ile Arg Leu Tyr Ser Leu Arg Asp Phe Thr Glu Leu Pro His Ser
73 35 40 45
74 Pro Leu Lys Phe His Thr Tyr Ala Val His Cys Cys Cys Phe Ser Pro
75 50 55 60
76 Ser Gly His Ile Leu Ala Ser Cys Ser Thr Asp Gly Thr Thr Val Leu
77 65 70 75 80
78 Trp Asn Thr Glu Asn Gly Gln Met Leu Ala Val Met Glu Gln Pro Ser
79 85 90 95
80 Gly Ser Pro Val Arg Val Cys Gln Phe Ser Pro Asp Ser Thr Cys Leu
81 100 105 110
82 Ala Ser Gly Ala Ala Asp Gly Thr Val Val Leu Trp Asn Ala Gln Ser
83 115 120 125
84 Tyr Lys Leu Tyr Arg Cys Gly Ser Val Lys Asp Gly Ser Leu Ala Ala
85 130 135 140
86 Cys Ala Phe Ser Pro Asn Gly Ser Phe Phe Val Thr Gly Ser Ser Cys
87 145 150 155 160
88 Gly Asp Leu Thr Val Trp Asp Asp Lys Met Arg Cys Leu His Ser Glu
89 165 170 175
90 Lys Ala His Asp Leu Gly Ile Thr Cys Cys Asp Phe Ser Ser Gln Pro
91 180 185 190
92 Val Ser Asp Gly Glu Gln Gly Leu Gln Phe Phe Arg Leu Ala Ser Cys
93 195 200 205
94 Gly Gln Asp Cys Gln Val Lys Ile Trp Ile Val Ser Phe Thr His Ile
95 210 215 220
96 Leu Gly Phe Glu Leu Lys Tyr Lys Ser Thr Leu Ser Gly His Cys Ala
97 225 230 235 240
98 Pro Val Leu Ala Cys Ala Phe Ser His Asp Gly Gln Met Leu Val Ser
99 245 250 255
100 Gly Ser Val Asp Lys Ser Val Ile Val Tyr Asp Thr Asn Thr Glu Asn
101 260 265 270
102 Ile Leu His Thr Leu Thr Gln His Thr Arg Tyr Val Thr Thr Cys Ala
103 275 280 285
104 Phe Ala Pro Asn Thr Leu Leu Leu Ala Thr Gly Ser Met Asp Lys Thr
105 290 295 300

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132 Val Ser Thr Trp Leu Cys Ala Gln Asp Leu Lys Asp Leu Val Gly Ile
133                      340                      345                      350
135 Phe Lys Met Asn Asn Ile Asp Gly Lys Glu Leu Leu Asn Leu Thr Lys
136                      355                      360                      365
138 Glu Ser Leu Ala Asp Asp Leu Lys Ile Glu Ser Leu Gly Leu Arg Ser
139                      370                      375                      380
141 Lys Val Leu Arg Lys Ile Glu Glu Leu Arg Thr Lys Val Lys Ser Leu
142 385                      390                      395                      400
144 Ser Ser Gly Ile Pro Asp Glu Phe Ile Cys Pro Ile Thr Arg Glu Leu
145                      405                      410                      415
147 Met Lys Asp Pro Val Ile Ala Ser Asp Gly Tyr Ser Tyr Glu Lys Glu
148                      420                      425                      430
150 Ala Met Glu Asn Trp Ile Ser Lys Lys Lys Arg Thr Ser Pro Met Thr
151                      435                      440                      445
153 Asn Leu Val Leu Pro Ser Ala Val Leu Thr Pro Asn Arg Thr Leu Lys
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168 tgattcacac attagctgat catggtgacg atgtcaactg ctgtgccttc tctttttccc 180
169 tcttggtcac ttgctccttg gacaaaacaa ttgccttgta ctggttaagt gactttactg 240
170 aactgcacac ttctccattg aagtttccata cctatgctgt ccactgctgc tgtttctccc 300
171 cttcaggaca tattttggca tctgtgtcaa cagatggtac cactgtccta tgggaatactg 360
172 aaaatggaca gatgctggca gtgatggaac agcctagtgg cagccctgtg agggtttgcc 420
173 agttttcccc agactccacg tgtttggcat caggggcagc tgatggaact gtggttttgt 480
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182 tcacaacttg tctttttgca cctaataccc ttttacttgc tactggttca atggacaaaa 1020
183 cagtgaacat ctggcaattt gacctgaaa cactttgcca agcaaggcgc acagaacatc 1080
184 agctgaagca atttacggaa gattggctcag aggaggatgt ctcaacatgg ctttgtgcac 1140
185 aagatttaaa agatcttggt ggtattttca agatgaataa cattgatgga aaagaactgt 1200
186 tgaatcttac aaaagaaagt ctggtctgat atttgaaaat tgaatctcta ggactgcgta 1260
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190 caagtcccat gacaaatctt gttcttcttt cagcggtaact tacacaaaat aggactctga 1500
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206 Gln Ile Lys Asn Met Val Lys Leu Ile His Thr Leu Ala Asp His Gly
207 35 40 45
209 Asp Asp Val Asn Cys Cys Ala Phe Ser Phe Ser Leu Leu Ala Thr Cys
210 50 55 60
212 Ser Leu Asp Lys Thr Ile Arg Leu Tyr Ser Leu Arg Asp Phe Thr Glu
213 65 70 75 80
215 Leu Pro His Ser Pro Leu Lys Phe His Thr Tyr Ala Val His Cys Cys
216 85 90 95
218 Cys Phe Ser Pro Ser Gly His Ile Leu Ala Ser Cys Ser Thr Asp Gly
219 100 105 110
221 Thr Thr Val Leu Trp Asn Thr Glu Asn Gly Gln Met Leu Ala Val Met
222 115 120 125
224 Glu Gln Pro Ser Gly Ser Pro Val Arg Val Cys Gln Phe Ser Pro Asp
225 130 135 140
227 Ser Thr Cys Leu Ala Ser Gly Ala Ala Asp Gly Thr Val Val Leu Trp
228 145 150 155 160
230 Asn Ala Gln Ser Tyr Lys Leu Tyr Arg Cys Gly Ser Val Lys Asp Gly
231 165 170 175
233 Ser Leu Ala Ala Cys Ala Phe Ser Pro Asn Gly Ser Phe Phe Val Thr
234 180 185 190
236 Gly Ser Ser Cys Gly Asp Leu Thr Val Trp Asp Asp Lys Met Arg Cys
237 195 200 205
239 Leu His Ser Glu Lys Ala His Asp Leu Gly Ile Thr Cys Cys Asp Phe
240 210 215 220
242 Ser Ser Gln Pro Val Ser Asp Gly Glu Gln Gly Leu Gln Phe Phe Arg
243 225 230 235 240
245 Leu Ala Ser Cys Gly Gln Asp Cys Gln Val Lys Ile Trp Ile Val Ser
246 245 250 255
248 Phe Thr His Ile Leu Gly Phe Glu Leu Lys Tyr Lys Ser Thr Leu Ser
249 260 265 270
251 Gly His Cys Ala Pro Val Leu Ala Cys Ala Phe Ser Arg Asp Gly Gln
252 275 280 285
254 Met Leu Val Ser Gly Ser Val Asp Lys Ser Val Ile Val Tyr Asp Thr
255 290 295 300
257 Asn Thr Glu Asn Ile Leu His Thr Leu Thr Gln His Thr Arg Tyr Val
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TIME: 14:52:07

Input Set : A:\30534111.app

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261                325                330                335
263 Met Asp Lys Thr Val Asn Ile Trp Gln Phe Asp Leu Glu Thr Leu Cys
264                340                345                350
266 Gln Ala Arg Arg Thr Glu His Gln Leu Lys Gln Phe Thr Glu Asp Trp
267                355                360                365
269 Ser Glu Glu Asp Val Ser Thr Trp Leu Cys Ala Gln Asp Leu Lys Asp
270                370                375                380
272 Leu Val Gly Ile Phe Lys Met Asn Asn Ile Asp Gly Lys Glu Leu Leu
273 385                390                395                400
275 Asn Leu Thr Lys Glu Ser Leu Ala Asp Asp Leu Lys Ile Glu Ser Leu
276                405                410                415
278 Gly Leu Arg Ser Lys Val Leu Arg Lys Ile Glu Glu Leu Arg Thr Lys
279                420                425                430
281 Val Lys Ser Leu Ser Ser Gly Ile Pro Asp Glu Phe Ile Cys Pro Ile
282                435                440                445
284 Thr Arg Glu Leu Met Lys Asp Pro Val Ile Ala Ser Asp Gly Tyr Ser
285                450                455                460
287 Tyr Glu Lys Glu Ala Met Glu Asn Trp Ile Ser Lys Lys Lys Arg Thr
288 465                470                475                480
290 Ser Pro Met Thr Asn Leu Val Leu Pro Ser Ala Val Leu Thr Pro Asn
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312 ctccacacat tgaactcaga caccaggtat gtcacaactt gtgcttttgc acctaatacc 180
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VERIFICATION SUMMARY

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L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date